



**A SHORT HISTORY OF  
TRANSPORT IN JAPAN  
FROM ANCIENT TIMES TO THE  
PRESENT**

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# 3. Ports and Shipping

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The cherry trees are in full bloom  
Now, while at the palace by the sea  
Of wave-bright Naniwa...

13th Day of the Second Month, 755 A. D.<sup>1</sup>

## Introduction

As a maritime nation, both domestic trade on coastal ships and international shipping trade through Japanese seaports have been the engines of the country's economic prosperity. In this chapter, the prime focus is on ports in the Ōsaka Bay at the eastern end of the Setō Inland Sea. The historical time period is from archaic times to the present day. The themes of port-related institutions and organisations in the Ōsaka Bay region are broadly representative of ports in other parts of Japan.

The justification for this choice of Ōsaka Bay is that it has a rich maritime history that has been documented continuously from the time when the Emperor moved his capital and established the Port of Naniwa (from the *Kojiki*, 712 A. D. and the *Nihon Shoki*, 720 A. D.). Furthermore, institutional changes to port ownership and administration described for Ōsaka Bay for over a millennium can be translated to the evolution of ports in other parts of Japan, especially during the period since the Second World War.

This chapter does not attempt to describe the configuration of ancient and medieval ports or to recount the physical changes in scale and function to seaports. An ancient mariner returning to the shoreline of Ōsaka Bay (formerly called Naniwa Bay) clearly would not recognise the vast extent of land reclamation at the eastern end of the Setō Inland

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1 Quoted by McClain and Osamu, 1999: 3.

Sea, the man-made islands and docks that make up the modern Hanshin port and the extensive metropolis of Ōsaka and Kōbe (see, for example, Kawanabe *et al.*, 2012). Neither does the chapter trace the history of Japanese naval ships and their bases (currently, the main ports of the Japan Maritime Self-Defence Force are at Yokosuka—32 km south of Yokohama, and at Kure—24 km south-south west of Hiroshima).

There are studies published in English on Ōsaka ports that contain information not covered in this chapter. The evolution of the ports of Naniwa, Watanabe, Ishiyama Honganji, Sakai and Ōsaka, in relation to their political and their functional role from the 5th century, is admirably summarised in English by Wakita (1999) and Sakaehara (2009). Pearson (2016) documents, in detail, the archeological evidence on the ancient port at Naniwa. Asao (*et al.*, 1999) give a detailed history of Sakai, and Yamasaki (*et al.*, 2010) describe the history of nearby Kōbe (Ōwara no tsu/Hyōgo). However, the focus here is more on port governance and the organisation of domestic shipping.

The chapter is organised in the following way, first with some general background information on the essential geographical features of Ōsaka Bay, noting the very early geomorphological processes that have altered river estuaries. The second section outlines ports and shipping from archaic times. The third section describes Ōsaka ports in the ancient period. This is followed by an explanation of the administration of ports in the Edō period when the merchant class organised ports and shipping. Sections follow on the beginning of the Meiji era—when Western models of port administration—were introduced through to the present day with the recent Japanese National Government policy of creating the Hanshin super-container port (Ōsaka and Kōbe Ports). The final section considers the policy of land reclamation because this has facilitated port infrastructure development as well as post-war industrialisation.

## The Geography of Ōsaka Bay

During the time of human occupation in Japan geomorphological processes have transformed the delta area of the Yamato and Yodo Rivers from a marine bay (Ōsaka Bay) to a fresh-water lagoon and finally to dry land (Pearson, 2016: 8–9 and Figure 2.2). Similar processes would have modified river estuaries in other parts of Japan. The greatest

transformations to the natural coastline have been made by man with the land reclamation programs dating from Edō times but intensifying with port developments in the latter part of the 20th century and early 21st century.

The waterway systems southwards of Lake Biwa (Kawanabe *et al.*, 2012) provided natural arteries for ancient domestic trade, with links to international trade routes through Ōsaka Bay (formerly Naniwa Bay). The Setō Inland Sea allows ships to pass on their journeys to and from China and Korea through relatively sheltered waters compared with the more exposed ocean route via the Kii Strait south of Shikōkū Island.

### The Use of the Sea in Archaic Times

Water transport has been of great importance from ancient times with the discovery of primitive dugout canoes and other fishing artifacts at various archeological sites confirming a strong association with the sea from late Palaeolithic and Jōmon times (10,000 B.C. to 300 B.C.) onwards. This technology allowed coastal settlements to forage further afield rather than the restricted hinterland of travel on foot (Hudson, 2017: 108). In this same period, evidence from ceramic fragments points to long-distance maritime trade between Kyūshū and both the Ryūkyūs and the Korean peninsula (Hudson, 2017: 110).

In the Palaeolithic period there is evidence of obsidian found on Honshū having been transported by sea from the off-shore volcanic island of Kōzushima (Hudson, 2017:106)—about 56 km south of the Honshū mainland at Shimoda. A dugout canoe made from the muku tree (*aphanante aspera*) discovered in Chiba prefecture, was measured at 7.45 metres in length and was dated around 3,000 B.C. (Naumann, 2000: 50–51). Archeological findings of dugout canoes from the late and final Jōmon periods indicate coastal travel, deep-sea fishing and trade, as obsidian was found only on islands off the coast of Honshū (and in Korea).

However, as Hudson (2017:111) notes there is “no direct information regarding social measures aimed at the governance of the sea.” It is certain that the chiefdoms and early states of western Japan in the Yayoi and Kōfun periods used bronze mirrors and glass beads from the south of the Korean peninsula (the Gaya Confederacy before it was invaded by Silla in 562) and mainland China as symbols of political power.

There are three Shintō shrine complexes in northern Kyūshū dedicated to female sea-deities. Hetsumiya, located at the coastal town of Genkai, Fukuoka, is dedicated to the deity Ichiki-shima-hime. The other two temples are in the Genkai Sea: Nakatsumiya on the island of Ōshima dedicated to the deity Taki-tsu-hime; and Ōki-tsu-miya on the island of Ōkinoshima and dedicated to Tagori-hime. Between the 4th and the 9th centuries these shrines were located at the points of embarkation and disembarkation for the official diplomatic missions between Japan and Silla (Korea) and China (Kodansha, 1993: 1013; Nelson, 2014).

The Yamato Kingdom gained access to these important sea routes by defeating the Iwai Rebellion in present day Fukuoka Prefecture (Hudson, 2017: 112). From the Kōfun period onwards, Dazaifu was an important military centre for the Yamato period from whence armies were dispatched to defend its Korean territory (the Kingdom of Mimana). A branch of the Yamato Court was established in Dazaifu from 663 (Heritage of Japan, 2020).

In 665, Japan lost 400 battle ships to a joint T'ang and Silla force at the mouth of the Kum (Geum) River that empties into the Yellow Sea. Later, Chinese Song dynasty (960–1279) ships came to Dazaifu and traded with representatives of various temples and shrines and their attached estates. Little trade was carried out by the central government of Japan. From the end of the 10th century to the beginning of the 12th century the most important centre for trade was Dazaifu that had an organisation especially established for foreign trade.

## Administration of Ancient Ōsaka Ports

In ancient times, powerful clans ruling as an *institution* would have controlled maritime ports. It is uncertain when Japanese ships first explored beyond their shores, nor are there descriptions of the seaports from where they embarked, but the first written evidence of a 'Japanese' envoy visiting China (Schottenhammer, 2013) is recorded in the *Hou Hanshu* (57 A.D.) which stated that the *Wa* (倭) brought tribute to the Chinese Court (textiles, sapan wood, bows and arrows, slaves and white pearls). In return, the Chinese Court sent silk fabrics, gold objects, bronze mirrors, pearls, lead and cinnabar. From the 1st century A.D., Chinese records (*wei zhi*) mention the land of *Wa* composed of a number of

states that joined a league in around 180 A.D. under the headship of Himiko, Queen of Yamatai, and who sent an envoy to the State of Wei (魏, 220–265) in 239 A.D.

Brown (1993) describes the *institutional* arrangements under the Yamato King control system (during the 5th century) as one where chiefs of clan (*uji*) dominated the politics of ancient Japan. The system would have evolved from previous eras (see McClain and Wakita, 1999: 1–4). The clan system, with family allegiances, would have exercised hierarchical control of the workforce of farmers and fishermen. It can be speculated, with a high degree of plausibility, that, from the earliest times, port operations would have been handled, under supervision, by those who specialised in navigating the river and coastal waters, who knew where to land boats and who acted as the wharfinger keeping account of the comings and goings of produce and other goods. Domestic and international exchange would have been facilitated through a peasant and slave labour force under the institutional control of the clan chief.

Twice the Wei rulers, Mingdi (reigned 227–239) and Shaodi (reigned 240–253), sent embassies to Japan (238 and 247) and four Japanese embassies were dispatched to Wei. An international port at Suminoe (Suminoe no tsu, 住吉津), was located just to the south of the modern Sumiyoshi Grand Shrine (containing the Gods of Seafarers) on the Yamato River. Sumiyoshi port is as old as Naniwa, being important from the 5th century onwards. The port had important state-related functions. This is where the Japanese envoys and military flotilla assembled before departure. From Sumiyoshi port the direct overland route to Asuka was shorter than from other ports.

A more centralised institution of the Emperor's Court emerged over time (Asuka Enlightenment) and made extensive use of Chinese techniques for expanding state power (Mitsusada with Brown, 1993). Japan adopted not only art and culture from China but, more or less, its complete administrative system. The T'ang Dynasty government set up the *Shi Bo Si* (市舶)—its Oceangoing and Marketing Department—in many coastal ports for the administration of foreign economy-related affairs by sea, including the export of silk products to Japan (Chaffee, 2010). Therefore, it is most certain that equivalent port-related functions were duplicated in Japan. Ruling elites (acting 'on behalf' of the authority

of the Emperor) introduced and reinforced the basic regulations on coastal and international shipping. Sets of maritime regulations (*kaisen shikimoku* or *kaisen taihō*) reveal information about seafaring practices in the medieval period.

The dates of maritime regulations that include articles on coastal trade ships, riverboats and port regulations are disputed because of their frequent recopying from documents dated 1223 (Damian, 2014: 2). Though few trade-related documents from the medieval period have survived the centuries, one set of port records provides much information about coastal shipping. The Records of Incoming Ships at the Hyōgo Northern Checkpoint (*hyōgo kitaseki irifune nōchō*) record data for over 1900 vessels that passed through the checkpoint at Hyōgo (today part of Kōbe City), in 1445 and the first two months of 1446 (Hayashiya, 1981). Each dated entry notes the port of registry of the ship, the type and volume of cargoes carried, such as salt and ceramics (Damian, 2014), the taxes levied on the items and dates collected, the name of the ship's captain and the name of the warehouse manager that handled the incoming items. The records show the flow of goods from the provinces to Hyōgo—gateway to the central court region of Kyōto.

### The Role of Temples and Shipping Agents

As early as the 7th century, Zen Buddhism was introduced into Japan from China. Although it was being taught by the 8th and 9th centuries, as a foreign religion, it failed to prosper until the early Kamakura period (1185–1333), when the Japanese nobility adopted it. The temples as *organisations* were a consumer of vast amounts of building materials, agricultural produce and soon developed expansive trading networks.

In addition, shipping *organisations* that had appeared earlier, and continued to develop during the Kamakura period, were the agents who took rice and other products of the *shōen* estates on consignment for distribution to markets (*toimaru*) and the co-operative guilds (*za*) that provided favourable reciprocal trade advantages and reduced competition (Pearson, 2016: 97).



## Ōsaka Ports During the Medieval Period

The key towns, shrines and early ports of Ōsaka Bay were Naniwa no Tsu, Sakai, Ōwada no Tomari (Hyōgo), Watanabe and Ishiyama Honganji. The characteristics of their governance is described ranging from Naniwa no Tsu as an Imperial port until its decline, Sakai as a port administered by town merchants and Ishiyama Honganji run by a Buddhist sect with extensive regional trading networks.

### *Naniwa no Tsu*

By the time that a port (Naniwa no tsu or Naniwazu, 難波津) was established at Naniwa, a complex administrative system was in place. Sakaehara (2009: 4–7) traces the origins of a port at Naniwa (some time in the late 5th century in the reign of Emperor Nintoku) to the building of Naniwa no Horie—a canal cut through the Uemachi Tablelands that acted both as a flood control barrier and a shortened route to the ocean from inland settlements via the Yodo and Yamato Rivers. Sakaehara (2009) notes the construction—near to the probable location of the port—of large storehouses with a floor area of some 82–98 square metres—probably to keep war supplies because the *Wa's* traditional ally on the Korean peninsula, Paekche, was being invaded by the northern state of Koguryo. With the fall of Paekche, new immigrants, including the Paekche royal clan, played an important role in the technological advancement of Japan.

Naniwa became an important seat of government and international trading centre carrying Japanese envoys to China during the T'ang Dynasty and where military flotillas were assembled. Ocean-going ships with crews of about 50 people could be pulled up on the beaches that were protected by rock berms. Seagoing ships carrying cargoes weighing up to 20 to 30 *koku*<sup>2</sup> (roughly 3,600 to 5,400 kg) docked in the area of the Naniwa where the cargoes were transferred to riverboats of 9 metres in length (Pearson, 2016: 55). A line of temples and manors of

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2 *Koku* (from the Edō era) is an important standard volumetric measurement of milled rice equal to 180.4 litres (enough to feed one adult for a year). Tax assessments, stipends to samurai and the wealth of *daimyō* were calculated in *koku* (Kodansha, 1993: 816).

temples controlled the transfer point between ships on the Inland Sea and riverboats. Both private and state trade was shipped through the Horie Canal.

Diplomatic missions to China from the 5th to the 8th century departed from Naniwa. These ships typically carried 150 people and they travelled in convoys of two to four ships, occasionally more (Pearson, 2016: 55). McClain and Wakita (1999: 3) attribute the ability for the Yamato lineage to extend its boundaries of dominance in central Japan to the convenient transport of soldiers and goods through Naniwa. In 645, Emperor Kōtoku built his palace, Naniwa-no-nagara-no-toyosaki-no-miya (難波長柄豊碕宮), in Ōsaka, making this area the capital (Naniwa-kyō).

By the time of Emperor Tenmu (reigned 672–686) the city measured about 3 km by 4 km in extent, with a walled government compound, some two hundred blocks for the aristocrat residents, and shops and homes for merchants, artisans and service workers (McClain and Wakita, 1999: 5). Government facilities for diplomatic functions, and residences for visiting diplomats, were constructed (Sakaehara, 2009: 7–8). The capital was short-lived, before moving inland to Heijo-kyō. Naniwa continued as a port of political, military, economic and transport importance serving the new inland capitals of various Emperors with palaces located in Nara and Kyōto.

The domestic port function of Naniwa is further clarified when the system of administrative laws (*ritsuryō*), issued from the capital Heijo-kyō, is explained. With the consolidation of the taxation system in the 8th century, taxes from all parts of western Japan were shipped by sea to Naniwa before being transshipped along the river systems to the capital. These taxes were special products from different regions (*chō*), different products paid in lieu of labour tax (*yō*) and the fixed amount of rice supplied as a ration to different offices each year. Many of the nobles, officials and clergy who were based in the capital also owned estates in parts of western Japan, and around Naniwa, and tributes from these estates were also assembled in Naniwa.

Naniwa lost its political and diplomatic importance as a port when Heijo-kyō and its subordinate town of Naniwa-kyō were integrated into a new capital at Nagaoka-kyō in 784. Despite its decline, a port close to the site continued to function but other nearby communities emerged as important centres of commerce, trade and religion during the Heian

(794–1185) and the Kamakura (1185–1333) periods (McClain and Wakita, 1999: 6).

In 785, a new canal connecting the Mikuni River (present-day Kanzaki River) and the Yodo River allowed ships from the Setō Inland Sea to by-pass Naniwa Port and dock either at Nagaoka-kyō, Yamazaki no tsu or Yodo tsu. Although considerably downgraded in its significance, trade continued at Naniwa because it is known, for example, that a merchant, Bunya no Miyatamaro (died 843 but date uncertain), amassed a fortune trading with Silla (Korea) during the mid-9th century (Sakaehara, 2009: 9). As pointed out by Wakita (1999: 25), the shift in the centre of economic gravity did not leave the Uemachi Plateau a “desolate wilderness” because people remained in the locality and continued to make a living from river transport or shipping.

### *Sakai*

One of the best examples of a port administered by the merchant class is that of Sakai, located on the head of the Setō Inland Sea, a few kilometres south of Suminoe no tsu, and close to the boundaries of the provinces of Izumi, Kawachi and Settsu (Asao *et al.*, 1999). In the 14th century, the area was an Imperial manor estate (*shōen*) producing salt for sale, but then became the base for fishing vessels supplying the Kasuga Shrine near Nara (Sansom, 1961: 189). The convenience of its location formed the base for the movement of army supplies during the civil conflict of 1337 to 1392 between the Southern and the Northern Courts.

During the next civil conflict, the *Ōnin no Ran* (1467–1477), shipping movements in the Setō Inland Sea became increasingly dangerous and trade shifted to the port of Sakai. The town of Sakai was surrounded by a moat and prospered through its administration by merchants (*naya-shu* or *kaigo-shu*). Merchants thrived on the trade with the Ming dynasty (1368–1644) established in 1401 by the third Muromachi *Shōgun*, Ashikaga Yoshimitsu, largely because ships utilised the Kii Channel then sailed to southern Kyūshū thereby avoiding piracy in the Setō Inland Sea (Osaka Toshi Kogaku Center, 1999: 18). However, ships were subject to more exposed weather and more dangerous sailing conditions.

After the civil wars, the town of Sakai was rebuilt in the early 15th century and granted special privileges by the Muromachi *bakufu* for

domestic and international trade. Japanese maritime trade grew rapidly in the 14th and early 15th centuries, and the enterprise of merchants, through licensed trade with China, brought great profit to the merchants and their *daimyō* protectors, and, sometimes, their sponsors. For example, the reported gross profit of sales in China was a factor of three based on a 1493 voyage out of Sakai (Sansom, 1961: 271). In 1548, both sides terminated trade missions (Sansom, 1961: 266) being replaced by unlicensed trade, especially by Japanese pirates (although the ships contained crews that were predominantly Chinese nationals).

After about 1500, Sakai replaced Hyōgo (under the direct control of the Muromachi *bakufu*) as the usual port of departure, for political and security reasons documented by Sansom (1961: 270–272). Sakai merchants organised and financed most of the voyages originating in the Home Counties. Sakai merchants also traded in the Setō Inland Sea by paying protection money to the Murakami “pirates” and facilitating trade for the Honganji Temple.

### *Ōwada no Tomari (Hyōgo)*

During the Nara period (710–784), the port of Kōbe, known then as Ōwada no Tomari, was already a major port of trade with China and other foreign countries. For a short time, the capital of Japan was moved from Kyōto to Kōbe’s Fukuhara district. At the same time, Hyōgo became a centre of military activity. Battles between the Heike and Genji clans occurred there, including the decisive Battle of Ichi no Tani in 1184.<sup>3</sup> In later years, Hyōgo’s port played an important role as a maritime centre for both the Setō Inland Sea and the Sea of Japan. It was also a rest station along the Saigoku Highway—a major highway that went from Kyōto to western Japan (Kobe Trade Information Office, <http://cityofkobe.org/about-kobe/history/>).

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3 A decisive battle during the Gempei War fought at the Taira defensive position to the west of Kōbe. The Taira clan (a strength of about 5,000 troops) were defeated by Minamoto no Yoshisune and Minamoto no Nororiyori (a strength of about 3,000 troops).

### *Watanabe no Tsu*

At the beginning of the 10th century an Imperial estate called Ōe no Mikuriya was established in the provinces of Settsu and Kawachi. Watanabe no tsu, located on the south bank of the Yodo River, was a relay point to transport foods to the Emperor in Heijo-kyō. Court nobility sailed to Watanabe-no-tsu then travelled on foot southwards to make pilgrimages to Shitenōji Temple, to the 117 temples on Koyasan (now Wakayama Prefecture), or further, across the mountainous Kii Peninsula to the Kumano shrines (now Mie Prefecture).

The port also functioned as an auxiliary port for coastal shipping in the Setō Inland Sea in the 11th century. Its administration was atypical because the *jitō* managers of the Imperial estate (*shōen*), the Watanabe clan, with a powerful navy, were appointed chief of police (*kebiishi*) and exercised marine police authority in the port and river estuaries. The port underwent a major transformation in late Heian and Kamakura periods evolving from a warehousing and transshipment centre to lumberyards and storehouses belonging to religious organisations and rich families.

Commencing in 1196, it was Tōdaiji's Abbot, Shunjō Chōgen, who developed a better port, protected by stone levees and piers, to accommodate oceangoing vessels (Wakita, 1999: 29). Its main function was for the transport of building materials for the temples and hence it was a private port. However, it did charge a small fee for any ship docking there—especially grain ships. Wakita (1999: 33) notes the paucity of historical documentation but speculates that local residents took over the self-governing organisation of Watanabe port—as occurred at Sakai and Tennōji.

### *Ishiyama Honganji*

From 1533 to 1580, the temple and town located at the estuary of the rivers Yodo and Yamato was the origins of the modern city of Ōsaka. It was the headquarters of a religious and secular organisation of the Honganji—a major branch of the Buddhist True Pure Land Sect (*Jodō shinshū*). The temple was founded in 1496 but grew into a large town within the temple complex all surrounded by moats and fortified walls

(Kodansha, 1993: 633). Ishiyama Honganji thus became a centre of religion and commerce that stretched across the province as a vast power structure described in the *Japan: An Illustrated Encyclopedia* (Kodansha, 1993: 633) as a “religious monarchy”.

The temple’s 10-year war with Oda Nobunaga was lost: when the temple surrendered in 1580 it was burnt on the orders of the *rennyō* (abbot). Recognising its strategic location, Toyotomi Hideyoshi built Ōsaka Castle (that stands today as a renovated monument) on the same site and he moved into this fortress in 1584. He restored Ōsaka’s central place in Japanese trading affairs, as well as building up his maritime power and fortune, initially in association with pirate trade before eradicating piracy, as explained earlier in Chapter 2, and by the Japan Heritage Portal Hub (2019).

Arnason (2010) describes in detail the rise of this region of Japan that became a “secondary state” (*institution*). After Toyotomi Hideyoshi gained hegemony and built his base in Ōsaka in 1583, the Ōsaka port (still a river port) became a renewed centre of international and domestic trade. Many of the canals based on the river system were excavated during his reign and that of his son. On Toyotomi Hideyoshi’s death, his son, Toyotomi Hideyori, became *daimyō* of a large and prosperous domain centred on Ōsaka Castle. However, in 1614, Tokugawa Ieyasu found a pretext to denounce Toyotomi Hideyori (1593–1615) for subversive actions, defeating him in field battles. The castle finally surrendered in June 1615 when the domain was transferred into Tokugawa control. This is an important point when port developments during the Edō period, especially those at Ōsaka, are discussed below.

## Port Administration in the Edō Era

Ōsaka became a region under the direct control of the Tokugawa *Shōgunate* in 1619. The extraordinary role of Ōsaka as a nerve centre of much trade and of financial support to the *Shōgunate* explains the importance of the *bugyōsho* (奉行所) of Ōsaka, and also why the *bugyō* was either consulted, or, on occasions, directed by the Edō *machi bugyō* (町奉行) acting for the *Shōgunate*. Edō’s officials seem to have been passive in documenting the inflow of goods to Edō and were often content to rely on detail from Nagasaki (Dejima for foreign trade) or Ōsaka, where the *bugyōsho* acted as a powerful agent of the *Shōgunate*.

Cullen (2010) explains that the key institution of coastal trade in Japan during the Edō era reflected three circumstances: the central trading importance of Ōsaka; the rising consumer market of Edō; and the scale of trade in sensitive commodities between these two dominant ports. The *bugyō* of Ōsaka was a central figure, acting on instructions from the Tokugawa *bakufu*. Administration of a port was divided between the national institution of the *rōjū* (老中)—in effect a cabinet of the *bakufu*—and the *kanjōsho* (勘定所), or Finance Office, and the local *machi bugyō* (magistrate of towns). Coastal trade was primarily a concern of the *machi bugyōsho*: there is little evidence that *kanjōsho*, *rōjū* or the *Shōgun*, intervened directly in port affairs (Cullen, 2009: 187). Under the *machi bugyō*, the workhorses were the *machi doshiyori* (町年寄) who were the wholesalers (*ton'ya*, 問屋) or guilds that represented them.

The plans for the excavations of canals in Ōsaka and the inspection of commodities, were administrated by the *machi bugyō*. However, most of the infrastructure of Ōsaka built between the late 16th and the 17th centuries—flood control on the major rivers, land reclamation, urban canals, main roads as urban thoroughfares and port development—were constructed by wealthy citizens of Ōsaka and not by the government. Under the permission of the *bakufu*, townspeople constructed canals in the marshes including Dōtombori that was completed in 1615 by the merchant Doton Nariyasu (Yamamukai, 2004: 12).

For example, Suminokura Ryōi (1554–1614) excavated several canals in Ōsaka including the Hozugawa and the Takasegawa to facilitate economy activities. Sand and soil excavated from these constructions were used in town creation (Nagai, 2004: 5)—a town area that was approximately 5km by 5km. They also built numerous bridges to the extent the town was called *Naniwa Happyakuya-bashi* (Naniwa's 808 bridges).<sup>4</sup> Of the estimated 200 bridges in this area only 6 per cent were built by the *bakufu* (Matsumura, 2004: 16). Wealthy merchants and citizens living along the streets of individual bridges built and maintained the vast majority of these bridges.

The *bakufu* asked Kawamura Zuiken (1617–1699) to plan the secure transport of commodities to Edō and developed coastal shipping routes in 1671 and 1672. By the 17th century ships plying the coastal trades (*hokkokubune*) had a capacity of 1,000 *koku* (98 gross tons). The Ōsaka

4 In Japanese, "808" is a metaphor for a very large number.

port was one of main ports of call on these routes. The construction of Edō as the new capital required large quantities of timber and stone from the provinces that stimulated coastal shipping.

Itami (see Chapter 2) was one of twelve towns that formed Settsu's sake brewing belt. From breweries outside the castle at Itami, an array of brands and labels in casks were exported to suppliers active in Edō (*kudari-zake*). Casks were transported first by horse to a point on the Kanzaki River about 8 km away, transshipped by boat to the port of Denbō, and finally loaded onto barrel barges (*taru kaisen*) bound for Edō. In the 1730s, Itami's sake exports bound for Edō exceeded 180,000 casks valued at about 64,800 *koku*, and demand pushed this amount progressively higher (Brecher, 2010: 27). The shipping route improved in 1784 when the Itami brewers finally received permission from the *bakufu* to use boats on the Ina River, allowing door-to-door water transport that delivered sake into Edō within a week, or sometimes less.

Together with improved coastal shipping, developments of transport infrastructure attracted commodity markets, such as the Zakoba fish market, the Tenma fresh food market and the Dōjima rice market, along the rivers and canals that brought prosperity to the Ōsaka region. Organised in 1694, the Ōsaka 24-wholesale group (*nijuushi kumi ton'ya*) and the 10-wholesale group (*to kumi ton'ya*) operated a virtual monopoly transport system of cargo ships (*higaki kaisen*) between Ōsaka and Edō. The economic rise of the merchants, at the expense of the *daimyōs* and their samurai retainers, was further reinforced because these organisations also operated as moneylenders and financiers.

Many coastal areas of Japan also grew over the course of the 18th and into the 19th centuries. They became more prosperous and more interconnected, and their locally active ports transformed into more prominent regional ports. For example, the port of Shimoda on the Izu peninsula on the island of Honshū (nowadays Shizuoka Prefecture) developed as it acted as a security point for the *bakufu*, where all ships bound for Edō were required to dock there for inspection up to 1721. The layout of these coastal ports in the Edō is typified by the port of Takamatsu on the northern part of Shikōkū Island (Figure 1). The castle is protected by a moat. Other canals provide safe haven for ships.





Figure 1. Screen Painting of Takamatsu Castle and its Port During the Edo Period.  
 Source: Photograph by author in Kagawa Museum, Takamatsu, Shikōkū, Japan.

## Port Administration in the Modern Monarchy Era

From the mid-19th century, Japan realised the need for trade in vital raw materials, such as oil, iron ore, and industrial products, and for a strong navy for defence. Phipps (2015) has written a book on the economic history of the commercial expansion of ports from 1858 until the early Meiji era by tracing maritime networks of exchange, transport, and information. Construction, or purchase, of ocean-going ships was given fresh emphasis in Japan. At the end of the 19th century, government subsidies to shipbuilders encouraged the industry, but it was only the pressures of the First World War that gave Japanese shipping companies the lion's share of Japanese foreign trade.

The Meiji government's policy of modernisation under a centralised government was designed to help Japan catch up with advanced Western nations. Japan's ports and harbours matured under the Meiji government's policy of industrial promotion, national wealth and military strength. Ports, harbours, railways, roads and other types of economic infrastructure were established at this time. The modernisation of the Japanese economy can be aptly illustrated with the case of Kōbe Port. In the U.S.-Japan Treaty of Trade and Amity (1858) Hyōgo was declared a designated open port under the treaty.

Under a Meiji government policy enacted in 1873, ports were deemed “government-owned structures”, which brought them under national government jurisdiction (Japan, Ministry of Land Infrastructure and Transport, n.d.). These facilities were ranked (Class One, Two and Three), and the government was directly responsible for the improvement of the five major Class One ports (including Ōsaka and Kōbe) which were central to the country’s international trade. The port of Ōsaka opened to foreign trade on 15 July 1868 but soon found it necessary to construct a new port because large vessels could not navigate along the rivers due to accumulation of silt.

Construction started at Tempozan, Ōsaka, in 1897 under a plan of a Dutch engineer, De Rijke,<sup>5</sup> with a budget as equivalent of 20 times the city’s annual budget. Tempozan wharf opened in 1922 and work on the port was finally finished in 1929. Further reconstruction and renovation work started in 1935 with the Central Pier being completed in 1944. Allied bombing severely damaged the port facilities in 1945 and they were further damaged as a result of the 1946 Shōwa Nankai earthquake of the 21 December 1945.

Class two and three ports were either under the sole jurisdiction of local governments or they were managed by prefecture and municipal governments. At that time, however, the Japanese constitution did not provide for autonomous local government, and the responsibility for these ports was in the hands of the prefecture governor, who was appointed by the national government. Local government merely served as the management body, bearing the expenses involved in managing the ports and harbours, while the administration of these facilities was actually directed by the national government.

At the end of the 19th century, a new *institution*—the Port Customhouse—was placed under the direct jurisdiction of the Japan Ministry of Finance. Around 1897, all laws and regulations concerning customs administration, particularly the *Customs Law* and the *Customs Tariff Law*, were enacted to reflect the provisions of the new treaties imposed on the country by foreign powers. At the same time, a new Customs organisational chart was set up, consisting of a secretariat, one division and six sections. The staff numbered a total of 1,240.

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5 Kamibayashi (2009) documents the civil engineering works in Japan, including the flood control of the Yodogawa, by Johannis de Rijke (1842–1913) and others.

This virtually laid the foundation of the present Japan Customs Administration (Japan, Department of Customs, 2021).

In 1924, the Cabinet of Prime Minister Katō Takaaki (1860–1926) implemented administrative reorganisation by integrating the whole responsibility of port and harbour administration into the Customs Department. Under an Imperial ordinance, the local harbour departments, which had previously been under the jurisdiction of the Ministry of Home Affairs, were all transferred to Customs. Japan's external trade declined with the intensification of military activities. Shipping was brought under state control to reinforce military transport capacity and customhouses were closed. The Marine Transportation Bureau assumed authority for their personnel and facilities.

Naval ship building grew rapidly at the same time, and, by 1940, Japan had one of the largest and most powerful navies ever built in the world, totalling 15 battleships and battlecruisers, 7 aircraft carriers, 66 cruisers, 164 destroyers and 66 submarines. Following Japan's surrender in the Second World War, and in accordance with the "Memorandum on the Japan Customs System" issued in 1946 by the General Headquarters of the Allied Forces, the Ministry of Finance again took the responsibility for all Customs matters.

### Port Administration in the Modern Democratic Era

After the Second World War, the *Port and Harbor Act* (1950) dramatically shifted port administration from the central government to local governments. American General Headquarters, which essentially controlled Japan at that time, ordered the Japanese Government to draw up a Port Act that would force local governments to assume port management by adopting the then current U.S.A. port authority system.

Hayashi and Seta (2012) describe the conflict between the central government (who wanted to remain in a position of power and influence) and the big five port cities including Kōbe and Yokohama who kept asking for priority treatment. Shibata (2008) notes that the major ports were already being developed by local government funds. In fact, the *Port and Harbor Act* defines a "port management body" as the Port Authority or a local public entity. Major port cities, including the city of Ōsaka (on 1 July 1952) have entitled themselves to a port management body under the Ōsaka Municipal Government. (Almost

all other ports are managed by prefecture governments; unions manage only a few ports.)

For example, there are four port areas on Ōsaka Bay, and they are administrated by each local government: Ōsaka Port by the City; Sakai Senboku Port by Ōsaka Prefecture; Kōbe Port by the Kōbe City; and Amagasaki-Nishinomiya-Ashiya Port by Hyōgo Prefecture. This regional decentralisation of port administration has resulted in competitive bidding by governments to develop ports in every coastal region of the country some of which are scarcely viable economically. Terada (2012) explains this proliferation of ports in considerable detail.

With the increasing container shipping in global maritime markets since the 1960s, the Ministry of Transport planned to institute a public corporation that would develop and manage international container terminals in Kōbe Port, Yokohama port and Nagoya port. The first two named cities, and the Nagoya Port Association—as port management bodies—however, repelled the plan, as the central government intended the corporations to take over port administration. Furthermore, the Ministry of Finance objected to the plan on financial grounds. After the Ministry of Transport lobbied the ruling party, the plan finally ended up as the *International Container Terminal Corporation Act* in August 1967—effectively establishing two Port Development Authorities, 外貿埠頭公団 (PDA hereinafter) as public corporations: the Keihin PDA financed by Tōkyō Metropolis and Yokohama City; and the Hanshin Foreign Trade Terminal Public Corporation (PDA) by Ōsaka City and Kōbe City.

The national government and private companies also invested into these PDAs. Since the PDAs took responsibilities not only in developing, but also managing, international container terminals, it led to a dualised administration in Ōsaka port. For the construction of many liner berths and container terminals, the “Hanshin and Keihin Port Authority” was founded by the investment of the central government in 1967. But, in 1982, the Authority was dissolved, and assets were transferred to public corporations established by local governments. Hanshin PDA was replaced by Kōbe PMC and Ōsaka PMC as affiliated organisations of the ports.

The trade in the container shipping industry declined after the Oil Shocks of 1973 and the over-development and surplus capacity of container wharves became a significant issue in Japan. Two PDAs were nominated for abolishment in the Administration Reform Commission.

The Cabinet made a decision in December 1977 to abolish the PDAs. On this issue of abolishing PDAs, conflicts inevitably arose amongst institutions of government and organisations: the Ministry of Transport appealed the decision with its objections; container-shipping companies, who had invested into PDAs, claimed a right to take over the container terminals; and the city governments, including Ōsaka City, welcomed the opportunity to take over the functions of PDAs.

Those conflicts lasted until another political decision was made in 1980: to replace the PDAs with a new institution of a Port Management Corporation, 埠頭公社 (PMC) in each port without any changes in the financial status for private companies. The cities took over the container terminals and the PMCs were under the supervision of the central government (the Ministry of Transport). After 1985, the national government formulated several plans with a basic aim of implementing a “Multipolar Pattern Japan” that encouraged local governments to have a claim for an international container port.

The intent of the final plan was to develop 39 new international container ports over 15 years (from 1986 to 2000). The number of international container ports in Japan increased eleven times from 6 ports in the 1960s to 66 ports in 2007. This National Ports Policy (Japan, Ministry of Land, Infrastructure, Transport and Tourism, 2009) eventually forced port management bodies into domestic competition for attracting shipping liners. At the same time, other Asian ports, such as Singapore, Hong Kong and Pusan, introduced their own container services. Falling behind those countries, the Japanese government reversed its policy so as to centralise port investment and the container freight: it first designated the Hanshin port (Ōsaka Port and Kōbe Port) as one of three “super hub ports” in 2004 and later designated them as one of two “strategic international container ports” in 2010.

The Hanshin Ports are allowed to apply for preferential funds from the national government. In accordance with those centralisation policies, the national government has promoted the privatisation of PMCs in order “to make them more economically efficient operations and to respond to customers’ need”. The Japan Ministry of Land, Infrastructure, Transport and Tourism (2019), concluded that existing port administrations had difficulties in responding to both shipping liners’ and shippers’ requests because they were public-sector institutions. The Ministry suggested that a private company, such as

a limited company, is a superior model for administrating a container port. Under the consideration of nominating a strategic international container port, the national government determined the feasibility of efficient management from the private sector as one of the criteria.

Ōsaka Port subsequently privatised its PMC to the Ōsaka Port Corporation with 100 per cent capital from the City of Ōsaka in 2010 (Kawasaki *et al.*, 2020). As a result, Ōsaka Port has three elements in its container port administration: the national government; the local government of Ōsaka City; and the Ōsaka Port Corporation. In addition to its old container terminal developed and managed by the Ōsaka City or PDA/PMC, a “strategic international container port” with a container pier has been developed: the wharf-land is owned by local government and other equipment, such as cranes, by Ōsaka Port Corporation. In addition, for the Hanshin Port, the Kōbe—Ōsaka International Port Corporation was launched by the national government (34% of capital), the City of Kōbe (31% of capital), the City of Ōsaka (31% of capital) and city banks (4% of capital).

As in most countries, Japanese port functions, such as administration, piloting, dredging and infrastructure development, are a combination of responsibilities shared by both public and private sectors. Public service ports are predominantly managed by the government except that certain functions, such as dredging, may be shared with private companies. The landlord model is common to many ports throughout the world where a government corporation administers the port and ‘owns’ the surrounding water such as the approach and departure channels; other functions are shared or are the responsibility of the private sector. As implied by the name of a privatised port, most functions are managed by the private sector except for pilotage or the environmental approval for marine dredging.

### Land Reclamation

One of the most extraordinary physical and economic developments in Japan, especially in the era after the Pacific War, has been the degree of land reclamation that has been undertaken in its oceans and bays (see <https://japanpropertycentral.com/real-estate-faq/reclaimed-land-in-japan/>). Whilst some of this has been driven by the need for container terminals, the planning of such reclamation has included the

integration of other land uses such as commercial, residential, roads and recreational. The City of Kōbe provides one example of the extent of land reclamation in Ōsaka Bay (<https://sustainableworldports.org/project/port-of-kobe-environmental-measures-in-reclamation-projects/>). The mining of material from Mount Rokkō, and the transportation of spoil by slurry pipeline into the bay, is an engineering feat in its own right. In addition to port and airport functions, land on the reclaimed new islands in the sea were sold to developers as residential, commercial and other urban land use. Locally called the “Kōbe Business Model”, land reclamation has generated income from both land and sea.

However, one problem of constructing facilities on landfill is the liquefactions that occur during major earthquakes. In January 1995 an earthquake of a magnitude 7.2 on the Richter scale, with an epicentre on the nearby island of Awaji, devastated the Kōbe area causing loss of life and major damage to structures (Chung, 1996, Figure 4.5.4, p. 294).

## Conclusions

Migration to the islands of Japan followed land bridges where the hunter-gather culture exploited shallow coastal waters for fishing from dug-out canoes. As society advanced with the influx of Yayoi people from continental Asia local clans formed, along with clan chiefs who exercised control over maritime resources. With the birth of the Yamatai Kingdom, centralised command over these resources occurred. Suminoe and Naniwa ports were *institutional* artifacts of a succession of the clan leaders, Kings of *Wa* and Emperors using primarily their diplomacy with China and Korea for trade in precious and symbolic items of power and their domestic movement of taxation rice and other products to the capital.

Just as Naniwa had supplanted Suminoe as an international point of embarkation and disembarkation Naniwa declined with the construction of a canal on the Yodo River and the rise of Watanabe—a port up-river on Imperial estates (*shōen*) and closer to the capital. Acting on the authority of the Emperor, samurai administered this port and formed a marine police force. The interpretation of the shifting patterns of control of international trade through Japanese ports from 600 to 1868 is summarised in Table 6, showing the dominant players over time who controlled international trade through Japanese ports.

From 600 until the tribute trade with the Sui and T'ang was abolished in Middle Heian times, the Emperor (*institution*) and his administration exercised tight control. Chinese merchants (*organisations*) entered this national policy vacuum with private international trade. Diplomatic trade resumed in the 10th to 13th centuries but it was now strongly controlled by the decentralised *institutions* of the warlords (in essence local government). With the rise of regional warlords and military governments from the Kamakura period onwards, in coastal fiefdoms, especially to the west of Japan, maritime piracy as an *organisation* was rife and the evidence of strong alliances between pirates as "lords of the sea" and the regional warlords (*institutions*) support one proposition of the new institutional economics: the existence of nested institutions.

Table 6. Dominant Players Controlling International Trade, Japan, from 600–1868.

Source: Author with assistance from Dr Naoya Akita.

Period	Description	Trade Type	Dominant Players Managing Trade
Asuka 600–618	Envoys to Sui	Tribute	Emperor—powerful
Nara 618–894	Envoys to T'ang	Tribute	Emperor—powerful
Middle Heian	Tribute trade abolished	Private	Chinese merchants—weak control
End of Heian (10th—13th C)	Free trade	Diplomatic	<i>Buke</i> —Decentralised but strong control
Early Kamakura	Chaotic—rise of early <i>wako pirates</i>	Private	Regional warlords—weak control
Middle Muromachi	Ming Trade	Tribute	<i>Shōgun</i> —powerful
Late Muromachi	Ming Trade—late <i>wako pirates</i>	Tribute	<i>Shōgun, daimyō, merchants</i> —weak control
Azuchi—Momoyama	<i>Nanbanboeki</i>	Private	<i>Kanpaku</i> —powerful
Edō 1603–1868	Regulated Isolation	National	<i>Shōgun</i> —powerful



One of the first unifiers of Japan, Toyotomi Hideyoshi, grew rich by participating in this illegal, international trade, destroyed the trading religious monarchy and port at Ishiyama Honganji (*organisation*) to secure a strategic site for the future Ōsaka Castle. With the unification of the country in the Edō period the Tokugawa government regained powerful control of international trade that included a policy of not paying tribute to Chinese Emperors.

Table 7 summarises the arguments presented in the earlier, substantive part of the chapter by considering the six ancient ports in the Ōsaka region in terms of whether the port administration was predominantly through an institution or an organisation, who were the dominant parties in port affairs, what were main landmark events that led to the functioning of each port and who were the main agents of change from one historical period to another.

Table 7. Early Ōsaka Ports in History—Institutional and Organisational Analysis.  
Source: Author.

Port (date)	Suminoe (< 5th C)	Naniwa (5–11th C)	Watanabe (11–16th C)	Ishiyama Honganji (16th C)	Sakai (16th C)
<i>Administration</i>	<i>Institution</i>	<i>Institution</i>	<i>Institution</i>	<i>Organisation</i>	<i>Organisation</i>
Dominant Party	<i>Wa</i> clans; Emperor	Emperor	Emperor; <i>Daimyō</i>	Buddhist Temple	Merchants
Landmark Events	Diplomacy with China Korea	Diplomacy; Taxation	Canal built on Yodo; Marine police	Land allocation to powerful elites	Trade with Ming; Piracy in Setō Inland Sea
Agents of Change	Decline of tribute trade with China	Canal building enhancing strategic location; capital at Naniwa	Canal building by-passing Naniwa to inland capital	Destroyed by warlord Toyotomi Hideyoshi	Toyotomi Hideyoshi control; Transfer of merchants to Ōsaka

The table illustrates the considerable variation in governance and who was responsible for major events. Suminoe, Naniwa and Watanabe were the creation of the ruling elites of *uji* clan chiefs and the Imperial Court

whereas the ports of Ishiyama Honganji and Sakai were administered respectively by a religious order and by a merchant association.

Administration of the port of Sakai can be interpreted as an ‘outlier’ in the medieval period in as much that it was run by merchant associations not by a regional warlord. Pirates often identified themselves not only with looting/pillaging associates but also with groups of wealthy merchants, often tied to the *egoshu*—the rich merchant associations of Sakai. During the *Ōnin no Ran* (1467–1477) shipping movements, the Setō Inland Sea became increasingly dangerous and trade shifted to the port of Sakai where it prospered in a town administered by merchants (called *nayashu* and later *kaigoshu*). They thrived on the trade with Ming dynasty China established by the third Muromachi *Shōgun*, Ashikaga Yoshimitsu. Port administration changed dramatically when Toyotomi Hideyoshi captured the town and transferred merchants to Ōsaka to grow the commercial activities of that embryonic town.

By 1619, Ōsaka Castle had been taken by the House of Tokugawa and its seaport theoretically was administered with broad oversight by the *machi bugyō* appointed by the *Shōgunate* (national institution) in the case of legal disputes arising. Port governance under the Tokugawa functioned in a complex way through a system of layered hierarchical spheres of authority, each of which retained some degree of autonomy. Despite the Ōsaka Port being located on a Tokugawa domain its infrastructure development of river works, canal construction, land reclamation, bridge building and warehouses was the result of private merchants’ initiatives (*organisations*). Much of this development was paid from merchant profits made from the transport and handling of rice (then the national currency) to the new capital of Edō.

During the Edō period, there were conflicts over international trade providing examples of policy reversals. For example, from the Chinese trading perspective, merchants and officials were critical of the low copper imports from Japan as a result of problems in the procurement of export copper from Japanese mines (Schottenhammer, 2008: 339). In 1701, the Japanese institutional response was to open a copper office (*dōza*, 銅座), which managed the transport of copper to China until 1712–1713 when it was closed down.

Foreign intervention and the military force of Western powers were factors shattering the institutional stability of the Tokugawa *bakufu*, which had lasted for two and a half centuries. The threat of the U.S.

black ships backing up demands for free international trade and the opening of ports Japan forced the *Shōgun* to consult with all *daimyōs* as a political precedent and with it came a perceived weakness of command that eventually resulted in the downfall of the regime and the reinstatement of the institution of Emperor. The Meiji Restoration brought in Western-styled democratic institutions with the ownership of ports being radically re-organised under the control of the national government. After the Second World War, the *Port and Harbor Act* (1950), strongly influenced by U.S. advisors during the Allied occupation of Japan, shifted port administration from the central government to local governments.

In the post-war era the development of ports and their administration followed much along Western lines. From approximately 1950–1970, the supply of berths for liners increased; from 1970–2000, container terminals were constructed, and many urban waterfronts were developed, much of them on reclaimed land; and from the 21st century onwards there was a move towards port re-organisation and the privatisation of container terminals. For example, the Hanshin Ports are allowed to apply for preferential funds from the national government. Ōsaka Port subsequently privatised its management to the Ōsaka Port Corporation with 100 per cent capital from the City of Ōsaka in 2010. ‘Consequently, container port administration in Ōsaka Port comprises three elements: the national government; the local government of Ōsaka City; and the Ōsaka Port Corporation. In addition, in October 2014, the Hanshin Port, Kōbe-Ōsaka International Port Corporation was launched by the national government (34% of capital), the City of Kōbe (31% of capital), the City of Ōsaka (31% of capital) and city banks (4% of capital).

Successful development policy entails an understanding of the dynamics of economic change if the policies pursued are to have the desired consequences. The directions of major port developments require a broad understanding of the relative roles of national, provincial and local governments in port and shipping policy. In Japan, this narrative of the history of port administration would suggest a temporal sequence highlighting the relative importance of: *uji* clan chiefs and the Emperor; ‘provincial government’—the military power of the regional *daimyō*—then private interests (merchants) taking over port construction and trade development (taxation rice) during the Edō era, albeit under the careful scrutiny of a national military government; followed by Meiji

government policies of modernisation—much along western lines for port administration; and finally national government intervention to make Japanese container ports more internationally competitive with the Hanshin “super port” model of administration.

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